

REMARKS

Entry and consideration of the above amendment preliminary to examination of the above-referenced application is respectfully requested.

In the parent application, an Office Action issued dated August 25, 1999, the subject application was restricted, objected to and rejected for formal matters as follows:

Election/Restriction

In the parent application the Examiner had required restriction under 35 USC § 121 between Group I claims 1-15 and 17-20 and Group II claims 16 and 21. Applicants hereby re-affirm their provisional election, with traverse, of Group I claims 1-15 and 17-20. Claims 16 and 21 are cancelled without prejudice to filing a divisional application.

Amendments to Specification

The first section has been added to update the history of the present application.

In the Specification:

In the parent application, the specification was objected to at Section 7. at page 3 of the Office Action. Applicants have made an earnest effort to amend all of the objected to language. The proposed amendments to the specification raise no new issues and introduce no new matter. Therefore, entry of the proposed amendments and withdrawal of the objection is respectfully requested.

Drawings

Formal drawings are submitted herewith.

35 USC § 112

In the parent application, Claims 1-15 and 17-20 were rejected under 35 USC § 112, first paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

It was asserted that with respect to claim 1, it is unclear as to what structural limitation is intended by the word "material" at line 5. Accordingly, claim 1 as well various of the other claims have been amended to delete the word "material".

It was also asserted that in claim 1, line 12 the position of the hydrocarbon adsorbent with respect the other elements of the system is unclear. Accordingly, claim 1 has been amended to include language to more clearly indicate the position of the various elements. Basis for the amendments to claim 1 is found at page 10, lines 9-17.

It was asserted that claim 2 is unclear as to how the refractory carrier is related to the refractory support material set forth in claim 1, line 7. The term refractory as been deleted from claim 1. Accordingly, in claim 1 the catalytic converter comprises the support material and the platinum group metal. In claim 2 the catalyst is deposited on a refractory carrier. Accordingly, claim 2 is clear and consistent with claim 1.

Claim 3, as well as claim 8, were rejected as being unclear. Claim 3 has been amended to recite a more specific embodiment. Basis for the amendment to claim 3 is in the specification at page 11, line 24. Furthermore, claim 3 has been amended to change "in the" with "at a" to avoid the rejection based on lack of antecedent basis.

Claim 4 was rejected as lacking clarity as to whether the applicants are attempting to claim the catalytic converter or the combination of the catalytic converter and the tailpipe. Claim 4 has been amended to more clearly indicate the location of the converter system. Basis is in the specification at pages 10 and 11 and Figures 1 and 3.

Claim 5, line 3, and also claims 18-19/5, were indicated to be unclear with regard to how titania related to the refractory support material set forth in claim 1. Claim 5 has been amended to indicate that titania is a support material for the platinum. Basis is in the specification at page 12, line 6. Claim 1 has been amended to delete "refractory" before "support material".

In claim 5, the structural limitation is the specific embodiment of the low temperature catalyst and the hydrocarbon adsorbent material recited in amended claim 5. In claim 5, line 7 T(50) is preceded by an indefinite article, "a" and therefore is used for the first time in the claims to characterize the adsorbent material. Basis in the specification is found at page 22, beginning at line 23.

In claim 5 the word "it" was indicated to be vague and indefinite. The word "it" has been deleted as part of the amendment.

Claims 8 and 14 were indicated to be unclear with regard to how the muffler plates are related to the refractory carrier and the refractory material in claim 1. Claim 1 has been amended to delete the term refractory. Claims 8 and 14 are directed to embodiments wherein the low temperature conversion catalyst and said adsorbent material are disposed in separate layers on muffler plates. Claims 8 and 14 have been amended to depend from claim 4.

Claim 9 was rejected for reasons similar to claims 2, 18 and 19. See the above discussion with regard to claims 2, 18 and 19.

Claim 12 has been amended to correct the dependency, which corrects the rejection based on lack of antecedent basis. With regard to the rejection based on lack of clarity between carrier and support

reference is made to the above discussion with regard to claims 2, 18 and 19.

Claim 15 was rejected for reasons similar to claims 2, 18 and 19. See the above discussion with regard to claims 2, 18 and 19. Accordingly, withdrawal of the rejection of claim 15 under 35 USC 112 is respectfully requested.

Claims 10-13 and 18 have been amended to delete "-type" as suggested by the Examiner. In claim 10 the language relating to cell walls has been corrected.

For the above reasons, the rejections and objections had all been withdrawn, based on the above amendments, in the parent application and accordingly, the application, as amended is believed to comply with 35 USC § 112.

New Amendment to Claim 1

Claim 1 has been amended to more clearly define the present invention.

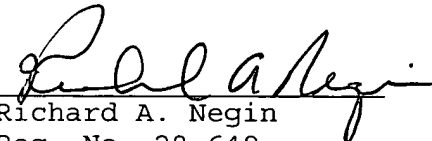
Claim 1 was amended to be directed to "catalyzing the conversion of hydrocarbons, carbon monoxide and nitrogen oxides". Reference to "and other pollutants" has been deleted. Basis for this amendment is in the specification at page 2, lines 4-10; page 16, lines 15-34 and the Examples. Additionally, light-off temperature is more clearly presented to be the temperature, "light-off temperature T_L of less than about 200°C, at which the said low temperature catalyst can attain fifty percent conversion". Basis for this amendment is in the specification at page 11, lines 6-7.

Claim 1 is directed to is directed to a system to catalyze "hydrocarbons, carbon monoxide, nitrogen oxides and other pollutants". The catalyst has "a T_L of less than about 200°C". T_L is define in the specification at page 11, lines 4-11 to be the temperature at which the catalyst attains fifty percent conversion. The catalyst is located to

"never be exposed to a temperature in excess of about 550°C". In specific embodiments the low temperature catalyst meets these limitation even where the system further comprises an upstream catalyst to be exposed to temperatures in excess of 650°C. (e.g. claims 6 and 7) The embodiment as recited in claim 5, directed to a reduced low temperature catalyst, performed particularly well as indicated in the Examples.

Preliminary to examination, applicants have amended the above referenced application to more specifically present invention. Consideration of the application as amended is respectfully requested. If the Examiner believes that for any reason direct contact with applicants' attorney would advance the prosecution of this application to finality, the Examiner is invited to telephone the undersigned at the number given below.

Respectfully submitted,


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